

L Number	Hits	Search Text	DB	Time stamp
1	5	((("20030130747") or ("20030195618") or ("20030171824") or ("20040005703") or ("20020019663")).PN.	US-PGPUB	2004/09/20 08:17
2	54	extracellular adj matrix and (623/17.11.ccls. or 623/17.16.ccls.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/20 08:18

	Document ID	KSC Issue Date	Page	Title
1	US 5108438 A	U 19920428	11	Prosthe
2	US 5258043 A	U 19931102	11	Method
3	US 5888222 A	U 19990330	18	Interver
4	US 5964807 A	U 19991012	9	Composi
5	US 5984967 A	U 19991116	23	Osteode
6	US 5989289 A	U 19991123	20	Bone gr
7	US 6017760 A	U 20000125	26	Isolati
8	US 6240926 B1	U 20010605	9	Composi
9	US 20010016772	U 20010823	20	Tissue
10	US 20010020476	U 20010913	10	Composi
11	US 6340369 B1	U 20020122	4	Treatin
12	US 6344058 B1	U 20020205	4	Treatin
13	US 20020022883	U 20020221	10	Tissue
14	US 6352557 B1	U 20020305	4	Treatin
15	US 6371988 B1	U 20020416	55	Bone gr
16	US 20020082698	U 20020627	9	Method
17	US 6419702 B1	U 20020716	4	Treatin
18	US 6423095 B1	U 20020723	16	Interve
19	US 6428576 B1	U 20020806	15	System
20	US 20020107575	U 20020808	9	Vertebr
21	US 20020128718	U 20020912	3	Method
22	US 20020128630	U 20020912	3	Method
23	US 20020133231	U 20020919	3	Treatin
24	US 6454804 B1	U 20020924	4	Enginee
25	US 20020151981	U 20021017	4	Transpl
26	US 20020156533	U 20021024	3	Natural
27	US 20020156532	U 20021024	3	Supplem
28	US 20020198599	U 20021226	14	System
29	US 20030009222	U 20030109	14	Synthet
30	US 20030023306	U 20030130	22	Vertebr
31	US 20030033017	U 20030213	34	Biodegr
32	US 6533819 B1	U 20030318	68	Injecta
33	US 20030060886	U 20030327	15	Interve
34	US 20030069639	U 20030410	19	Methods
35	US 6569442 B2	U 20030527	8	Prepara
36	US 20030100948	U 20030529	26	Connect
37	US 20030114930	U 20030619	10	Apparat
38	US 6613091 B1	U 20030902	35	Spinal
39	US 20030180266	U 20030925	62	Methods
40	US 20030195629	U 20031016	55	Bone gr
41	US 6645247 B2	U 20031111	3	Supplem
42	US 6648920 B2	U 20031118	4	Natural
43	US 6648919 B2	U 20031118	5	Transpl
44	US 6648918 B2	U 20031118	3	Treatin
45	US 20030216812	U 20031120	12	Vascula
46	US 20030220692	U 20031127	15	Prepara
47	US 20040019381	U 20040129	13	Spinal
48	US 20040034427	U 20040219	9	Bioarti
49	US 20040049270	U 20040311	23	Bone gr
50	US 6719798 B2	U 20040413	9	Vertebr
51	US 20040083002	U 20040429	19	Methods
52	US 20040083001	U 20040429	21	Methods

US-PAT-NO: 5888222

DOCUMENT-IDENTIFIER: US 5888222 A

\*\*See image for Certificate of Correction\*\*

TITLE: Intervertebral spacers

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## Detailed Description Text - DETX (21):

The BMPs are preferably introduced into the chamber 30 with a suitable carrier 74 as shown in FIG. 8. The carrier may be any suitable medium capable of delivering the proteins to the implant. Such carriers are well known and commercially available. One preferred carrier is an absorbable collagen sponge as shown in FIG. 8 marketed by Integra LifeSciences Corporation under the trade name Helistat.RTM. Absorbable Collagen Hemostatic Agent. Another preferred carrier is an open cell polylactic acid polymer (OPLA). Other potential matrices for the compositions may be biodegradable and chemically defined calcium sulfate, tricalcium phosphate (TCP), hydroxyapatite (HA), biphasic TCP/HA ceramic, polylactic acids and polyanhydrides. Other potential materials are biodegradable and biologically well defined, such as bone or dermal collagen. Further matrices are comprised of pure proteins or extracellular matrix components. The osteoinductive material may also be an admixture of the osteoinductive cytokine and a polymeric acrylic ester carrier. The polymeric acrylic ester can be polymethylmethacrylic. The carriers are preferably provided in strips or sheets which may be folded to conform to the chamber 30.

Current US Original Classification - CCOR (1):

623/17.16

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in 15-25 lamellae around the nucleus pulposus.

## Brief Summary Text - BSTX (10):

Although transplantation of living cells risks rejection by graft host reaction, this invention broadly recognizes that transplantation of the extracellular matrix of the nucleus pulposus is unlikely to incite a graft host reaction. In the preferred embodiment, autograft nucleus pulposus cells are harvested, cultured, then added to nucleus pulposus extracellular matrix obtained from recently deceased humans or animals. The combined nucleus pulposus material is then introduced into the injured or diseased disc.

## Detailed Description Text - DETX (2):

Broadly according to the method of this invention, autograft nucleus pulposus cells are harvested, cultured, added to nucleus pulposus extracellular matrix material, then injected into the injured or diseased disc. The nucleus pulposus cells and extracellular matrix are preferably harvested from a live human, though recently deceased human or animal donors may alternatively be used. Depending upon the extent of the harvest, the recipient may function at least in part as a donor, or the tissues from others, including fetal sources, may be used, preferably having a familial relationship to minimize or avoid the need for immunosuppressive substances. Guidelines for tissue procurement including surgical technique of removal, number of hours between death of the donor and tissue procurement, and testing of the donor for infectious disease, are well described.

## Detailed Description Text - DETX (3):

Following nucleus pulposus harvest, the tissue is processed to kill the living cells. Care is taken to preserve the extracellular matrix. Guidelines for processing the harvested nucleus pulposus as described are well known to those skilled in the art. For example, the tissue could be frozen and thawed.

## Detailed Description Text - DETX (4):

Autologous nucleus pulposus chondrocyte like cells are obtained by aspiration or biopsy of healthy discs of the patient. The harvested nucleus pulposus cells are isolated and cultured using standard techniques. The harvested sterile nucleus pulposus is morselized and washed with phosphate buffered saline. The cells are released from the extracellular matrix with 0.2% clostridial collagenase (Worthington CLS II, 140u/mg) and agitated. See Klagsburn, "Methods in Enzymology, Vol. VII. The resulting suspension is filtered with a 153.mu.g nylon sieve (Tetko, Elmford, N.Y.).

## Detailed Description Text - DETX (7):

The living cells from cell culture are implanted into the donor extracellular matrix to form a living nucleus pulposus. In the preferred embodiment, the donor extracellular matrix is morselized. Morselization of the